

Clinical Department.

COMPLETE SUPRAPUBIC PROSTATECTOMY UNDER NITROUS OXIDE GAS ANESTHESIA.

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IN the following case one kidney was so seriously affected that it was thought injudicious to use chloroform or ether. Gas was employed for the complete operation and proved very satisfactory. I feel sure that, in a number of these old patients suffering from prostatic hypertrophy, the kidneys are very often implicated and are in no condition to stand the irritation of the usual anesthetics. In gas we have an agent which has absolutely no effect upon the kidney structures and therefore permits an operation which otherwise it would be hazardous to perform. In some of these cases the anesthetic, and not the operation, is the cause of death, although the fatal issue may be delayed for several days.

S. N., aged sixty-eight. Family and previous history good; gonorrhea at the age of twenty-five.

Present illness.—Five years ago patient began to suffer from difficulty in micturition; the stream was slow in starting and diminished in size. Micturition was somewhat increased in frequency. Nevertheless, the health was not much disturbed until two years ago, when the difficulty became greater and the patient began to suffer from occasional nausea. One year ago the nausea was more pronounced, the appetite was poor and flesh and strength gradually failed. The difficulty in micturition increased and about six months ago he was unable to void a stream and incontinence set in. There was no pain nor local discomfort.

Examination.—The patient is feeble and anemic; the muscles are soft and flabby; there has evidently been loss of flesh. The heart and lungs are negative. Above the symphysis there is a firm, ovoidal, fluctuating mass which extends to the umbilicus; it is dull on percussion and, no doubt, is the distended bladder. The left kidney is easily palpable and forms a mass about the size of a large orange. On deep inspiration it can be grasped between the hands. It is not tender. The other kidney is not palpable.

The prostate is enlarged; the right lobe slightly more than the left. As a whole, the gland is smooth, not nodular. It is firm in consistency but not hard. The border can be mapped out readily. There is nothing about it suggestive of a new growth. The vesicles cannot be felt. The external genitalia are normal. There is a hernia on the right side. The temperature is normal; the pulse 78, of good volume. The arteries are soft and not tortuous. The patient is wearing a rubber bag on account of the dribbling. A silk catheter, with a prostatic curve, is readily introduced. It meets with only slight resistance in the prostatic urethra, but apparently after it enters the bladder it seems to encounter something that gives one the impression of a projection in the middle line. Nine hundred cubic centimeters of urine of a pale straw color and slightly cloudy are withdrawn.

Urinalysis.—Pale, straw color, turbid, acid; S. G. 1.012; normal odor; moderate amount of albumin; no sugar; epithelial cells of various shapes, pus cells, granular debris; no casts. Bacilli in moderate numbers.

Diagnosis.—Enlarged prostate with middle projection. Secondary hydronephrosis with infection.

On account of the extreme weakness of the patient

and the condition of the kidney, it was thought unwise to operate at this time, so he was sent home with a nurse who was directed to catheterize him every six hours, irrigate the bladder twice daily with a boric acid solution and give hexamethylenetetramine externally. After two weeks he began to improve and at the end of four months he had regained a very fair condition of health. The size of the kidney had somewhat diminished, but the organ was still distinctly palpable. The urine was less purulent and the albumin had decreased.

The gas was administered for me by Dr. Rushmore, who gave it mixed with oxygen. The patient went rapidly under and remained entirely quiet, completely relaxed and free from cyanosis for thirty minutes, the time required for the complete operation and the application of the dressing. Within five minutes after the gas had been taken off the patient had regained consciousness completely; there were no after-effects and the convalescence was satisfactory in every way.

Operation.—(Dr. William Fisher.) The suprapubic opening was made; two lobes were found in the middle line just behind the urethral orifice. An incision was made with a pair of straight scissors and just to the side of these the edge of the incision was slightly raised with a blunt dissector. The index finger of the operator was then introduced into this incision, while my own index and middle fingers were passed into the rectum and pressed the gland upward. The enucleation was easy and complete. The bleeding on account of the congestion of the vessels produced by the gas was somewhat more than that seen under ether or chloroform, but was not sufficient to give any trouble. Nothing was introduced into the prostatic cavity; a double drainage tube and two strips of iodoform gauze were passed into the bladder, but no sutures were used. The external wound was packed with iodoform gauze. The edges of the upper angle of the wound (skin and muscle) were approximated.

The secretion of urine was abundant. There was no pain, the bleeding was insignificant. The bladder was irrigated through the tube after twelve hours. After this the irrigations were continued once daily. The gauze, which had been inserted into the bladder, was removed on the second day. The tubes were removed on the fourth day and not replaced. After this an occasional irrigation through the urethra was practised. The temperature ranged from about 99° to 100°. The first urine was passed through the urethra on the seventh day; sounds were introduced once; the suprapubic wound rapidly granulated. The patient was discharged on the fourteenth day with the wound completely closed, except for a slight superficial granulating surface above the muscle. There was no leakage after the eleventh day.

The examinations since have shown the patient to be in perfect health; he has gained about forty pounds; the function of the bladder is absolutely perfect; the urine is nearly clear. He passes urine only once at night and four or five times during the day.

A FORTY PER CENT MORTALITY AMONGST CHILDREN.—The medico-sanitary situation in Lapland appears to be ominous. A series of reports shows that the population of the extreme north of Russia is almost devoid of medical assistance, so that the local industries are deprived, during long periods, of many workmen, resulting in a continuous decline of output. The mortality amongst children is most striking, amounting in some localities to 40 per cent. It is not stated if this figure relates to infants under one year only, but presumably it does.